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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,656	07/28/2003	Takao Aichi	00862.023153.	4468
5514 7590 01/29/2008 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER KASSA, HILINA S	
			ART UNIT 2625	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/627,656	Applicant(s) AICHI, TAKAO	
	Examiner Hilina S. Kassa	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/21/2007 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 7 and 8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiura et al. (US Publication Number 2002/0080391 A1), Couwenhoven et al. (US

Patent Number 6,354,689 B1), and further in view of Kamoshida et al. (US Patent Number 6,565,174 B2).

**(1) regarding claim 1:**

As shown in figures 1-2, Sugiura et al. discloses a print control apparatus (242, figure 2) which can be connected to a server (23, figure 2, paragraph [0015], lines 1-3) that generates print data on the basis of printer information and information to be printed (paragraph [0014], lines 2-8), comprising:

an acquisition unit for acquiring printer information (231, figure 2) from a printer (2P, figure 2) connected to said apparatus (paragraph [0022], lines 2-12; note that the control apparatus manages printer information acquired from the print server managing a printer);

a transmission unit for transmitting information required to specify the information to be printed (paragraph [0021], lines 1-12), and the printer information to the server (paragraph [0014], lines 9-10);

a reception unit for receiving print data from the server as a response (paragraph [0015], lines 5-6); and

a print control unit for controlling the printer to print the print data (paragraph [0015], lines 1-3);

Sugiura et al. discloses all of the subject matter as described as above except for specifically teaching non-ejection nozzle information *specifying* a non-ejection nozzle of a print head and wherein the server generates *null data for one group of available*

*nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups based upon the non-ejection information specifying the non-ejection nozzle acquired by said acquisition unit.*

However, Couwenhoven et al. disclose non-ejection nozzle information *specifying* a non-ejection nozzle of a print head (column 3, lines 50-58; note that malfunctioning or non-ejecting nozzles get specified) and wherein the server generates *null* data (column 10, lines 10-13; note that a zero data gets assigned to the mal-performing or the non-ejecting nozzles) *for one group of available nozzle groups which are divided by a non-ejection nozzle* (column 10, lines 10-13; note that a zero data gets assigned to the mal-performing or the non-ejecting nozzles), *and the server generates print data for another group of available nozzle groups* (column 6, lines 43-50; note that the available or active nozzles can be able to print) based upon the non-ejection information *specifying the non-ejection nozzle* acquired by said acquisition unit (column 6, lines 50-54; note that the active nozzles n2-n14 can be able to proceed with the printing based on the non-ejecting nozzles), and

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skilled in the art to have non-ejection nozzle information specifying a non-ejection nozzle of a print head and wherein the server generates null data for one group of available nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups based upon the non-ejection information specifying the non-ejection nozzle acquired by said acquisition

unit. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-24). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 1.

Sugiura et al. and Couwenhoven et al. disclose all of the subject matter as described as above except for specifically teaching *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data.*

However, Kamoshida et al. teach *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data* (figure 5, column 10, lines 51-61; note that the sheet-feed amount is reduced from the predetermined sheet-feed amount by the distance equivalent to the differences between the unused nozzle).

Sugiura et al., Couwenhoven et al. and Kamoshida et al. are combinable because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data. The suggestion/motivation for doing so would have been in order to save paper and acquire a better control of the apparatus (column 2, lines 13-15). Therefore, it would have been obvious to combine Sugiura et

al., Couwenhoven et al. with Kamoshida et al. to obtain the invention as specified in claim 1.

**(2) regarding claim 2:**

Sugiura et al. further discloses, the apparatus according to claim 1, wherein the server generates the print data for performing printing (paragraph [0021], lines 7-12) using a nozzle group having a greater number of nozzles among a first nozzle group and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle information acquired by said acquisition unit.

Sugiura et al. disclose all of the subject matter as described as above except for specifically teaching using a nozzle group having a greater number of nozzles among a first nozzle group (column 3, lines 58-59) and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle information acquired by said acquisition unit (column 3, lines 60-67).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skilled in the art to have using a nozzle group having a greater number of nozzles among a first nozzle group and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle information acquired by said acquisition unit. The suggestion/motivation for doing so would have been in order to elongate the lifetime of the print head so that the printing cost is reduced (column 4, lines 29-31). Therefore, it would have been obvious to

combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 2.

**(3) regarding claim 3:**

Sugiura et al. further disclose, the apparatus according to claim 1, further comprising a display which is connected to a computer network (23L, figure 2; paragraph [0014], lines 1-4), and displays data provided by a server connected to the computer network (paragraph [0022], lines 1-5), and wherein a location of the information to be printed is transmitted to the server via a window which is displayed on said display and is provided by the server (paragraph [0022], lines 6-12; paragraph [0066], lines 1-6).

**(4) regarding claim 4:**

Sugiura et al. further disclose, the apparatus according to claim 3, wherein a print mode of the printer is input via the window (WN4 figure 6, paragraph 87, lines 1-3) which is displayed on said display (33b, figure 1; paragraph [0087], lines 4-6), and the print mode is transmitted to the server together with the printer information (paragraph [0081], lines 1-5).

**(5) regarding claim 5:**



Sugiura et al. disclose all of the subject matter as described as above except for teaching, wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles.

However, Couwenhoven et al. disclose wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles (column 10, lines 10-13).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-29). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 5.

**(6) regarding claim 6:**

Sugiura et al. disclose a print control apparatus of claim 1 (242, figure 2); and a printer (2P, figure 2).

Sugiura et al. disclose all of the subject matter as described as above except for teaching, a server for generating print data for performing printing without using a non-ejection nozzle on the basis of printer data and information to be printed.

However, Couwenhoven et al. disclose a server for generating print data for performing printing without using a non-ejection nozzle on the basis of data and information to be printed (column 9, lines 18-25).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art a server for generating print data for performing printing without using a non-ejection nozzle on the basis of data and information to be printed. The suggestion/motivation for doing so would have been in order to elongate the lifetime of the print head so that the printing cost is reduced (column 4, lines 29-31). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 6.

**(7) regarding claim 7:**

Sugiura et al. further disclose, a print control method using a server (23, figure 2; paragraph [0015], lines 1-3) that generates print data on the basis of printer information and information to be printed (paragraph [0014], lines 2-8), comprising:

an acquisition step of acquiring printer information (paragraph [0014], lines 4-6) from a connected printer (paragraph [0022], lines 1-8);

a transmission step of transmitting information required to specify the information to be printed (paragraph [0021], lines 1-12), and the printer information to the server (paragraph [0014], lines 9-10);

a reception step of receiving print data from the server as a response (paragraph [0015], lines 5-6); and

a printer control step of controlling the printer to print the print data (paragraph [0047], lines 1-7);

Sugiura et al. discloses all of the subject matter as described as above except for specifically teaching non-ejection nozzle information *specifying* to a non-ejection nozzle of a print head and wherein the server generates *null data for one group of available nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups* based upon the non-ejection information *specifying the non-ejection nozzle* acquired by said acquisition.

However, Couwenhoven et al. disclose non-ejection nozzle information *specifying* a non-ejection nozzle of a print head (column 3, lines 50-58; note that malfunctioning or non-ejecting nozzles get specified) and wherein the server generates *null data* (column 10, lines 10-13; note that a zero data gets assigned to the malfunctioning or the non-ejecting nozzles) *for one group of available nozzle groups which are divided by a non-ejection nozzle* (column 10, lines 10-13; note that a zero data gets assigned to the malfunctioning or the non-ejecting nozzles), *and the server generates print data for another group of available nozzle groups* (column 6, lines 43-50; note that the available or active nozzles can be able to print) based upon the non-ejection information *specifying the non-ejection nozzle* acquired by said acquisition unit (column 6, lines 50-54; note that the active nozzles n2-n14 can be able to proceed with the printing based on the non-ejecting nozzles).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to have non-ejection nozzle information specifying a non-ejection nozzle of a print head and wherein the server generates null data for one group of available nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups based upon the non-ejection information specifying the non-ejection nozzle acquired by said acquisition unit. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-24). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 7.

Sugiura et al. and Couwenhoven et al. disclose all of the subject matter as described as above except for specifically teaching *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data.*

However, Kamoshida et al. teach *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data* (figure 5, column 10, lines 51-61; note that the sheet-feed amount is reduced from the predetermined sheet-feed amount by the distance equivalent to the differences between the unused nozzle).

Sugiura et al., Couwenhoven et al. and Kamoshida et al. are combinable because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data. The suggestion/motivation for doing so would have been in order to save paper and acquire a better control of the apparatus (column 2, lines 13-15). Therefore, it would have been obvious to combine Sugiura et al., Couwenhoven et al. with Kamoshida et al. to obtain the invention as specified in claim 7.

**(8) regarding claim 8:**

Sugiura et al. further disclose, a computer-executable program product embodied in a computer-readable storage medium, comprising:

a code of an acquisition step of acquiring printer information (paragraph [0014], lines 4-6) form a connected printer (paragraph [0022], lines 1-8);

a code of transmission step of transmitting information required to specify the information to be printer (paragraph [0021], lines 1-12), and the printer information to the server (paragraph [0014], lines 9-10);

a code of reception step of receiving print data from the server as a response (paragraph [0015], lines 5-6); and

a code of a print control step of controlling the printer to print the print data (paragraph [0047], lines 1-7);

Sugiura et al. discloses all of the subject matter as described as above except for specifically teaching non-ejection nozzle information *specifying* a non-ejection nozzle of a print head and wherein the server generates *null data for one group of available nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups* based upon the non-ejection information *specifying the non-ejection nozzle* acquired by said acquisition step.

However, Couwenhoven et al. disclose non-ejection nozzle information *specifying* a non-ejection nozzle of a print head (column 3, lines 50-58; note that malfunctioning or non-ejecting nozzles get specified) and wherein the server generates *null data* (column 10, lines 10-13; note that a zero data gets assigned to the mal-performing or the non-ejecting nozzles) *for one group of available nozzle groups which are divided by a non-ejection nozzle* (column 10, lines 10-13; note that a zero data gets assigned to the mal-performing or the non-ejecting nozzles), *and the server generates print data for another group of available nozzle groups* (column 6, lines 43-50; note that the available or active nozzles can be able to print) based upon the non-ejection information *specifying the non-ejection nozzle* acquired by said acquisition step (column 6, lines 50-54; note that the active nozzles n2-n14 can be able to proceed with the printing based on the non-ejecting nozzles).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skilled in the art to have non-ejection nozzle information specifying a non-ejection nozzle of a print head and wherein the server generates null data for one

group of available nozzle groups which are divided by a non-ejection nozzle, and the server generates print data for another group of available nozzle groups based upon the non-ejection information specifying the non-ejection nozzle acquired by said acquisition step. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-24). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 8.

Sugiura et al. and Couwenhoven et al. disclose all of the subject matter as described as above except for specifically teaching *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data.*

However, Kamoshida et al. teach *wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data* (figure 5, column 10, lines 51-61; note that the sheet-feed amount is reduced from the predetermined sheet-feed amount by the distance equivalent to the differences between the unused nozzle).

Sugiura et al., Couwenhoven et al. and Kamoshida et al. are combinable because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the server gives a notice to the printer of reducing a feed amount by the number of unused nozzles preparatory to transmission of the print data. The suggestion/motivation for doing so

would have been in order to save paper and acquire a better control of the apparatus (column 2, lines 13-15). Therefore, it would have been obvious to combine Sugiura et al., Couwenhoven et al. with Kamoshida et al. to obtain the invention as specified in claim 8.

**(9) regarding claim 9:**

Sugiura et al. further discloses, the computer-executable program product embodied in a computer-readable storage medium according to claim 8, wherein the server generates the print data for performing printing (paragraph [0021], lines 7-12) using a nozzle group having a greater number of nozzles among a first nozzle group and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle information acquired by said acquisition unit.

Sugiura et al. disclose all of the subject matter as described as above except for specifically teaching using a nozzle group having a greater number of nozzles among a first nozzle group (column 3, lines 58-59) and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle information acquired by said acquisition unit (column 3, lines 60-67).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skilled in the art to have using a nozzle group having a greater number of nozzles among a first nozzle group and a second nozzle group separated by the non-ejection nozzle in the print head based upon the non-ejection nozzle



information acquired by said acquisition unit. The suggestion/motivation for doing so would have been in order to elongate the lifetime of the print head so that the printing cost is reduced (column 4, lines 29-31). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 9.

**(10) regarding claim 10:**

Sugiura et al. further disclose, the computer-executable program product embodied in a computer-readable storage medium according to claim 8, wherein a location of the information to be printed is transmitted to the server via a window which is displayed on a display for displaying data provided by the server (paragraph [0022], lines 6-12) connected to a computer network and is provided by the server (paragraph [0024], lines 1-5).

**(11) regarding claim 11:**

Sugiura et al. further disclose, the computer-executable program product embodied in a computer-readable storage medium according to claim 10, a print mode of the printer is input via the window (WN4 figure 6, paragraph [0087], lines 1-2) which is displayed on the display (33b figure, paragraph [0087], lines 4-6), and the printer mode is transmitted to the server together with the printer information (paragraph [0081], lines 1-5).

**(12) regarding claim 12:**

Sugiura et al. disclose all of the subject matter as described as above except for teaching, wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles.

However, Couwenhoven et al. disclose wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles (column 10, lines 10-13).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skilled in the art wherein the server generates the print data so as to transmit null data to a nozzle group having a smaller number of nozzles. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-29). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 12.

**(13) regarding claim 13:**

Sugiura et al. discloses all of the subject matter as described as above except for specifically teaching a notifying unit for notifying a printer that a unit paper feed amount is to be shortened by lines corresponding in number to a nozzle group having the smaller number of nozzles among the first nozzle group and the second nozzle group

which are separated by the non-ejection nozzle, based upon the non-ejected nozzle information acquired by said acquisition unit.

However, Couwenhoven et al. teaches a notifying unit for notifying a printer that a unit paper feed amount is to be shortened by lines corresponding in number to a nozzle group having the smaller number of nozzles among the first nozzle group and the second nozzle group which are separated by the non-ejection nozzle (column 5, line 63-column 6, lines 3; note that the group of nozzles compensate for the malfunctioning nozzle and the second group of nozzles print along the same row of image pixels; also, the receiver medium is advanced in a perpendicular direction by a distance equal to half of the print head height), based upon the non-ejection nozzle information acquired by said acquisition unit (column 3, lines 54-67).

Sugiura et al. and Couwenhoven et al. are combinable because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to have a notifying unit for notifying a printer that a unit paper feed amount is to be shortened by lines corresponding in number to a nozzle group having the smaller number of nozzles among the first nozzle group and the second nozzle group which are separated by the non-ejection nozzle, based upon the non-ejected nozzle information by said acquisition unit. The suggestion/motivation for doing so would have been in order to effectively compensate inoperative ink nozzle without substantial loss of density in the set of ink drop states for each image pixel (column 4, lines 21-24). Therefore, it would have been obvious to combine Sugiura et al. with Couwenhoven et al. to obtain the invention as specified in claim 13.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Billet** (US Patent Number 6,010,205) discloses selectively activating nozzles to compensate for inoperative nozzles.

**Murcia et al.** (US Patent Number 6,270,187 B1) discloses a method to reassign printing elements if any printing elements of a print head has failed.

**Otsuki** (US Patent Number 6,336,703, B1) discloses an inkjet printer uses interlaced printing to form raster lines at intervals in the sub-scanning direction.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins could be reached at (571) 272- 7406.

Any response to this action should be mailed to:

Commissioner of Patent and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Application/Control Number:  
10/627,656  
Art Unit: 2625

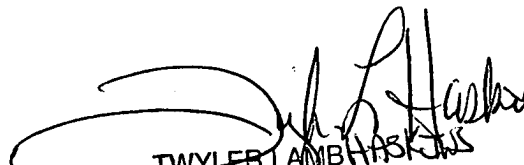
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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Hilina Kassa

January 22, 2008



TWYLER LAMBHASKUS  
SUPERVISORY PATENT EXAMINER